Author Index to Volume 13

Alberts, J. R.
—; Leimbach, M. P.: The First Foray: Maternal Influences in Nest Egression in the Weanling Rat, 417
Allen, M. G. See Inoff, G. E., 191
Alpern, H. P. See Greer, C. A., 7
Amsel, A. See Chen, J.-S., 469, 481

Bachevalier, J.
—; Blozovski, D.: Acquisition and Retention of Classical Conditioning in the Newborn Rat, 519
Baer, D. S.
—; McClearn, G. E.; Wilson, J. R.: Fertility, Maternal Care, and Offspring Behavior in Mice Prenatally Treated with Tobacco Smoke, 643
Bekoff, A. See Bekoff, M., 225
Bekoff, M.
—; Byers, J. A.; Bekoff, A.: Prenatal Motility and Postnatal Play: Functional Continuity? (Comment), 225
Bennett, T. L. See Guyot, G. W., 309, 317
Berger, R. J. See Walker, J. M., 443
Blass, E. M. See Cramer, C. P., 165
Blozovski, D. See Bachevalier, J., 519
—; Cudennec, A.: Passive Avoidance Learning in the Young Rat, 513
Boerngen, R. See Masur, J., 107
Bolles, R. C. See Collier, A. C., 141
Brackbill, Y.
—; Schroder, K.: Circumcision, Gender Differences, and Neonatal Behavior: An Update, 607
Bramblett, C. A.
A Model for Development of Social Behavior in Vervet Monkeys, 205
Brownback, T. See Misanin, J. R., 85
Buchwald, N. A. See Levine, M. S., 357
Byers, J. A. See Bekoff, M., 225

Campbell, B. A. See Stehouwer, D. J., 385
Chamove, A. S.
Dietary and Metabolic Effects on Rhesus Social Behavior: Protein and Protein-Calorie Malnutrition, 287
Dietary and Metabolic Effects on Rhesus Social Behavior: Phenylalanine-Related Dietary Alterations, 299
Charlebois, A. T.
—; Fried, P. A.: Interactive Effects of Nutrition and Cannabis Upon Rat Perinatal Development, 591
Chen, J.-S.
—; Amsel, A.: Learned Persistence at 11-12 Days But Not at 10-11 Days in Infant Rats, 481
—; Amsel, A.: Retention under Changed-Reward Conditions of Persistence Learned by Infant Rats, 469
Cohen, D. J. See Inoff, G. E., 191
Collier, A. C.
—; Bolles, R. C.: The Ontogenesis of Defensive Reactions to Shock in Preweanling Rats, 141
Cramer, C. P.
—; Blass, E. M.; Hall, W. G.: The Ontogeny of Nipple-Shifting Behavior in Albino Rats: Mechanisms of Control and Possible Significance, 165
Crnic, L. S.
Models of Infantile Malnutrition in Rats: Effects on Maternal Behavior, 615
Cross, H. A. See Guyot, G. W., 309, 317
Cudennec, A. See Blozovski, D., 513

Da Silva, V. A.
—; Ribeiro, M. J.; Masur, J.: Developmental, Behavioral, and Pharmacological Characteristics of Rat Offspring from Mothers Receiving Ethanol During Gestation or Lactation, 653
Davis, J. L. See Jensen, R. A., 1
Davis, K. See Gurski, J. C., 463
Dineen, J. T.
—; Meyer, W. J.: Developmental Changes in Visual Orienting Behavior to Featural Versus Structural Information in the Human Infant, 123
Domato, G. C. See Franchina, J. J., 25
Dooling, R.
—; Searcy, M.: Early Perceptual Selectivity in the Swamp Sparrow, 499

Epstein, H. T.
EEG Developmental Stages, 629
Evans, B.
Learned Responses to Movement in Neonates, 95

Fagen, J. W.
—; Rycek, R. F.: Effect of Handling on Positive and Negative Contrast Effects, 37
Ferguson, H. B. See Sussman, P. S., 545
Franchina, J. J.
—; Domato, G. C.; Patsiokas, A. T.; Griesemer, H. A.: Effects of Number of Pre-Exposures on Sucrose Taste Aversion in Weanling Rats, 25
Fried, P. A. See Charlebois, A. T., 591

Gallagher, R. E. See Joseph, R., 527
Galler, J. R.
—; Manes, M.: Gender Differences in Visual Discrimination by Rats in Response to Malnutrition of Varying Durations, 409
Home-Orienting Behavior in Rat Pups Surviving Postnatal or Intergenerational Malnutrition, 563
Priority and Reliability of Codo and Carlini's Procedure (Comment), 435
Gordon, T. P. See Wilson, M. E., 637
Graessle, C. A.
Prenatal Influence of Mild Decompressions on Hooded Rats, 399
Graham, D. L.
—; Hasenstab, L. L.; Kinney, L.; Kuntz, J. A.: The Effects of Litter Size on the Expressivity of the Jaundice Genotype in Gunn Rats, 55
Greer, C. A.
—; Alpern, H. P.: Paradoxical Effects of *d*-Amphetamine Upon Seizure Susceptibility in 2 Selectively Bred Lines of Mice, 7
Griesemer, H. A. See Franchina, J. J., 25

Gurski, J. C.
—; Davis, K.; Scott, J. P.: Interaction of Separation Discomfort with Contact Comfort and Discomfort in the Dog, 463
Guyot, G. W.
—; Cross, H. A.; Bennett, T. L.: Early Social Isolation of the Domestic Cat: Responses to Separation from Social and Nonsocial Rearing Stimuli, 309
—; Bennett, T. L.; Cross, H. A.: The Effects of Social Isolation on the Behavior of Juvenile Domestic Cats, 317

Hall, W. G. See Cramer, C. P., 165
Halverson, C. F., Jr. See Inoff, G. E., 191
Hamburgh, M. See Johanson, I. B., 331
Hasenstab, L. L. See Graham, D. L., 55
Heaton, M. B.
—; Klein, S. L.: Learning Deficits in the Neonatal Peking Duckling Produced by Decreased Oxygen Consumption During Late Prenatal Periods: A Cautionary Note, 633
Hennessy, M. B.
—; Li, J.; Levine, S.: Infant Responsiveness to Maternal Cues in Mice of 2 Inbred Lines, 77
—; Li, J.; Lowe, E. L.; Levine, S.: Maternal Behavior, Pup Vocalizations, and Pup Temperature Changes Following Handling in Mice of 2 Inbred Strains, 573
Hinderliter, C. F. See Misanin, J. R., 85
Hull, C. D. See Levine, M. S., 357
Hull, E. See Kleese, D., 233

Ignatovitch, G. S. See Sheimann, I. M., 585
Innes, K. See Shaw, E., 131
Inoff, G. E.
—; Halverson, C. F., Jr.; Allen, M. G.; Cohen, D. J.: Pathways Between Constitution and Competence During the 1st 5 Years of Life, 191

Jensen, R. A.
—; Davis, J. L.; Shnerson, A.: Early Experience Facilitates the Development of Temperature Regulation in the Cat, 1
Johanson, I. B.
Alterations in the Maternal Behavior of Rats Rearing Hypothyroid and Hyperthyroid Offspring, 111
—; Turkewitz, G.; Hamburgh, M.: Development of Home Orientation in Hypothyroid and Hyperthyroid Rat Pups, 331
Development of Olfactory and Thermal Responsiveness in Hypothyroid and Hyperthyroid Rat Pups, 343
Joseph, R.
—; Gallagher, R. E.: Gender and Early Environmental Influences on Activity, Overresponsiveness, and Exploration, 527

Khutzian, S. S. See Sheimann, I. M., 585
Kinney, L. See Graham, D. L., 55
Kleese, D.
—; Hull, E.: Adult Responsiveness to Ultrasonic Signals from Gerbils of Varying Ages: Parity, Gender, and Housing Effects, 233
Klein, S. L. See Heaton, M. B., 633
Kuntz, J. A. See Graham, D. L., 55

Leimbach, M. P. See Alberts, J. R., 417
Levine, M. S.
—; Hull, C. D.; Buchwald, N. A.: Development of Motor Activity in Kittens, 357
Levine, S. See Hennessy, M. B., 77, 573
Li, J. See Hennessy, M. B., 77, 573
Lowe, E. L. See Hennessy, M. B., 573
Lown, B. A.
A Sociobiological Analysis of Communal Nesting and of Male Parental Care in Laboratory Mice (Comment), 103

Manes, M. See Galler, J. R., 409
Masur, J. See Da Silva, V. A., 653
—; Schutz, M. T.; Boerngen, R.: Gender Differences in Open-Field Behavior as a Function of Age, 107
McClearn, G. E. See Baer, D. S., 643
Meyer, W. J. See Dineen, J. T., 123
Miller, D. B.
Review of *Critical Periods*. John Paul Scott, 441
Misanin, J. R.
—; Brownback, T.; Shaughnessy, L. D.; Hinderliter, C. F.: Acquisition and Retention of Multidirectional Escape Behavior in Preweanling Rats, 85
Monsour, A. P. See Nagy, Z. M., 373

Nadler, R. D.
Child Abuse: Evidence from Nonhuman Primates, 507
Nagy, Z. M.
—; Porada, K. J.; Monsour, A. P.: Ontogeny of Short- and Long-Term Memory Capacities for Passive Avoidance Training in Undernourished Mice, 373
Niemi, R. R.
—; Thompson, W. R.: Pavlovian Excitation, Internal Inhibition, and their Interaction with Free Operant Avoidance as a Function of Age in Rats, 61

Oppenheim, R. W. See Reitzel, J., 455
Metamorphosis and Adaptation in the Behavior of Developing Organisms, 353
Metamorphosis and Adaptation in the Behavior of Developing Organisms (Erratum), 661
Review of *Studies on the Development of Behavior and the Nervous System. Volume 4. Early Influences*. G. Gottlieb, 437

Patsiokas, A. T. See Franchina, J. J., 25
Pfeifer, S.
Role of the Nursing Order in Social Development of Mountain Lion Kittens, 47
Porada, K. J. See Nagy, Z. M., 373
Provine, R. R.
Development of Between-Limb Movement Synchronization in the Chick Embryo, 151

Reite, M.
—; Short, R.: A Biobehavioral Developmental Profile (BDP) for the Pigtailed Monkey, 243
Reitzel, J.
—; Oppenheim, R. W.: Ontogeny of Behavioral Sensitivity to Glycine in the Chick Embryo, 455
Ribeiro, M. J. See Da Silva, V. A., 653
Rycek, R. F. See Fagen, J. W., 37

Schroder, K. See Brackbill, Y., 607
Schutz, M. T. See Masur, J., 107
Scott, J. P. See Gurski, J. C., 463
Searcy, M. See Dooling, R., 499
Shaughnessy, L. D. See Misanin, J. R., 85
Shaw, E.
—; Innes, K.: The "Infantilization" of a Cichlid Fish, 131
Sheimann, I. M.
—; Khutzian, S. S.; Ignatovitch, G. S.: Periodicity in the Behavior of Grain Beetle Larvae, 585
Shnerson, A. See Jensen, R. A., 1
Short, R. See Reite, M., 243
Smart, J. L.
Attempts at Equivalent Maternal Care for Well-Fed and Underfed Offspring: Are the Problems Appreciated? (Comment), 431

Stamps, L. E.
Relationship Between Heart Rate Indices of the Orienting Response and Birth Weight in Normal Full-Term Newborns, 33
Stehouwer, D. J.
—; Campbell, B. A.: Ontogeny of Passive Avoidance: Role of Task Demands and Development of Species-Typical Behaviors, 385
Sussman, P. S.
—; Ferguson, H. B.: Retained Elements of Early Avoidance Training and Relearning of Forgotten Operants, 545

Thompson, W. R. See Niemi, R. R., 61
Turkewitz, G. See Johanson, I. B., 331

Wainwright, P.
Relative Effects of Maternal and Pup Heredity on Postnatal Mouse Development, 493
Walker, J. M.
—; Berger, R. J.: The Ontogenesis of Sleep States, Thermogenesis, and Thermoregulation in the Virginia Opossum, 443
Walsh, R. N.
On the Necessity for a Shift in Emphasis from Means-Oriented to Problem-Oriented Research in Developmental Psychobiology (Comment), 229
Ward, R.
Some Effects of Strain Differences in the Maternal Behavior of Inbred Mice, 181
Wilson, J. R. See Baer, D. S., 643
Wilson, M. E.
—; Gordon, T. P.: Age Differences in the Duration of Mating Periods of Female Rhesus Monkeys, 637
Wright, J. C.
The Development of Social Structure During the Primary Socialization Period in German Shepherds, 17

Subject Index to Volume 13

Abdominal decompression 399
Abuse, 507
Acquisition, 385
Active-avoidance learning, 545
Activity, 527
Adult condition, 233
Adult stimuli, 417
Affect, interaction, 463
Age changes, 205
Age difference, 545
Aging, 637
A/J C57BL/6J DBA/2J, 181
Alpha activity, 243
Alpha energy, 629
Amphetamine, 7
Arrhythmias, 243
Attachment, 243, 309, 463
Auditory perception, 499
Auditory system, 357
Avoidance learning, 527

Barometric pressure, 399
Barotrauma, 399
Behavior, 243, 607, 643
Behavioral continuity, 225
Behavioral suppression, 513
Bioenergetics, 443
Birth weight, 33
Blue acara, 131
Body temperature, 573
Book reviews, 437, 441
Brain excitability, 7
Brain weight, 629

Canine socialization, 17
Cannabis, 591
Cardiac conditioning, 33
Chick, 151
Chick embryo, 455
Child, 507
Cichlid, 131
Circumcision, 607
Classical conditioning, 519
Clonus, 7
Comments and criticism, 103, 225, 229
Communal nesting, 103
Communication, 205
Competence, 191
Conditioning, 95
Constitution, 191
Consummatory behavior, 37
Contact, 111
Contact comfort, 463
Contrast effects, 37
Coordination, 151
Cross-fostering, 77, 573

Defense reactions, 385
Defensive reactions, 141
Detection threshold, 141
Development, 7, 61, 151, 243, 527
Developmental homeostasis, 493
Developmental stages, 629
Development of young, 131
Distress cries, 309
Domestic cat, 1, 309, 357
Domestic cats, 317
Domestic chick, 455
Domestic dog, 17, 463
Dominance, 17

Early childhood, 191
Early development, 181
Early experience, 1
Early handling, 573
Ecdysone, 585
EEG, 243, 629
Electric shock, 385, 513
Embryo, 151
Emotion, 463
Emotionality, 399
Endothermy, 443
Enriched and restricted (deprived) environments, 527
Errata, 661
Estrogen sensitivity, 637
Ethanol, 653
Evolution, 443
Excitation, 61
Exploration, 527
Exploratory behavior, 17

Familiarity, 25
Fertility, 643
Fetal alcohol syndrome, 653
Flapping, 151
Flurothyl, 7
Freezing, 141

Gender differences, 107, 233, 409, 527, 607
Gender dimorphism, 629
Gender effects, 409
Genotype, 493
Glycine, 455
Gorilla, 507
Grain beetle, 585
Grooming, 111
Growth, 409, 563
Gunn rat, 55

Habituation, 123
Handling, 37, 55
Heart rate, 243
Heterosis, 493
Home orientation, 331
Home-orienting behavior, 563
Homeothermy, 1
Hooded rat, 399
Hormones of metamorphosis, 585
Human infants, 123
Human neonates, 95
Human newborns, 33

Humans, 191, 629
Hyperactivity, 7, 527
Hyperthyroidism, 331
Hypothyroidism, 331
Hypoxia, 399

Inbred mice, 181, 573
Inbred strains, 77
Inbreeding, 493
Infancy, 123
Infant, 507, 607
Inhibition, 61
Intergenerational deprivation, 409
Intergenerational malnutrition, 409

Jaundice, 55

Kittens, 357

Laboratory mouse, 7, 77, 103, 181, 373, 493, 643
Laboratory rat, 25, 37, 55, 61, 85, 107, 111, 141, 165, 331, 343, 385, 399, 409, 417, 431(C), 435(C), 469, 481, 513, 519, 527, 545, 563, 591, 615, 653
Lactation, 653
Larvae moult, 585
Lashley test, 409
Latent inhibition, 25
Learning, 61, 85, 95, 585
Learning deficits, 633
Learning development, 633
Licking, 37
Limb, 151
Linear regression, 205
Litter size, 55
Locomotion, 357, 513
Longitudinal, 191
Longitudinal study, 205
Long-term memory, 373

Male parenting, 103
Malnutrition, 287, 299, 409, 563, 615
Maternal behavior, 111, 181, 573, 615
Maternal control, 417
Maternal cues, 77
Maternal effects, 493
Maternal odor, 77
Maternal stimuli, 417
Mathematical modeling, 205
Mating behavior, 637
Maturation, 519
Means-centered research, 229
Memory, 519, 585
Metamorphosis, 353, 661(E)
Mongolian gerbils, 233
Monkey, 507
Mortalities, 399
Mortality, 563
Mother, 507
Mother–offspring interactions, 181, 417, 431(C), 435(C)
Mother-pup interactions, 573
Motility, 151
Motivation, 141
Motor activity, 357
Mountain lion, 47
Movement, 95
Mus musculus, 77, 103
Myoclonus, 7

Natural selection, 353, 661(E)
Neonates, 607
Nesting, 111
Neurogenesis, 151
Neurotransmission, 455
Newborns, 191, 373
Newborn viability, 399
Nipple-shifting, 165
Non-lactating adults, 417
Novelty, 287
Nursing, 111
Nursing order, 47
Nutrition, 591

Observational methods, 435(C)
Offspring locomotion, 417
Olfaction, 343
Olfactory cues, 417
Ontogenetic adaptation, 353, 661(E)
Ontogeny, 61, 455, 481
Open field, 55, 417
Open-field behavior, 107
Optic trauma, 399
Orientation, 343
Overresponsiveness, 527
Oxygen deficits, 633

Parental care, 131
Parity effects, 233
Passive avoidance, 373, 385
Passive-avoidance learning, 545
Pattern vision, 123
Peking ducklings, 633
Perseveration, 527
Persistence, 469, 481
Phenylketonuria, 299
Physiology, 243
Pigtailed monkey, 243
Play, 317
Postnatal development, 493
Postnatal play, 225
PREE, 469, 481
Pre-exposures, 25
Pre-gestation exposure, 591
Pregnancy, 653
Prenatal development, 399
Prenatal motility, 225
Prenatal stress, 399
Prenatal treatment, 643
Preschool, 191
Preweanlings, 85, 373, 385, 417, 431(C), 435(C)
Primary socialization, 17, 463
Primate, 507
Problems-oriented research, 229
Protein deficiency, 409, 563
Protein deprivation, 409
Pup responsiveness, 77

Receptors, 455
Reinstatement, 469
REM sleep, 443
Reproduction, 637
Research paradigms, 229
Research strategy, 229
Response suppression/inhibition, 527
Retardation, 299
Retention, 85, 385, 469, 545
Retrieval, 111
Rhesus monkeys, 287, 299, 637

Seizures, 7
Separation, 309
Separation distress, 463
Shock, 141
Shock escape, 85
Short-term memory, 373
Sibling interaction, 47
Sleep, 243
Slow wave sleep, 443
Social behavior, 205, 287, 299

Social isolation, 287, 309, 317
Social ontogeny, 47
Social structure, 17
Sociobiology, 103
Song sparrows, 499
Species-typical behaviors, 385
Spontaneous escape reaction, 513
Sprague-Dawley rat, 25
Stereotypic behaviors, 385
Stimulus organization, 123
Strain, 493
Strychnine, 455
Suckling, 165, 469
Sucrose, 37
Swamp sparrows, 499

Taste aversion, 25
Telemetry, 243
Temperature, 243
Temperature regulation, 1, 513
Thermogenesis, 443
Thermoregulation, 443
Thermoregulation development, 573
Thermotaxis, 343
Thyroid, 331
Thyroid hormone, 111
Thyroxine, 343
Tobacco smoke, 643
Tolerance, 591
Transitional period, 481

Ultrasound, 233, 573
Unconditioned responding, 141
Undernourishment, 373, 431(C), 435(C)
In-utero exposure, 591

Vervet monkey, 205
Vestibular stimulation, 95
Virginia opossum, 443
Visual development, 123
Visual discrimination, 409
Visual features, 123
Visual system, 357
Vocalizations, 499

Walking, 151
Weaning, 165
Weanlings, 25

Statement of Ownership, Management and Circulation
(*Required by 39 U.S.C. 3685*)

1. Title of publication: Developmental Psychobiology
2. Date of filing: 8 September 1980
3. Frequency of publication: Bimonthly
   A. Number of issues published annually: six
   B. Annual subscription price: $60.00
4. Location of known office of publication: John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158
5. Location of the headquarters or general business offices of the publishers: John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158
6. Publisher: John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158
   Editor: Gilbert W. Meier, Jr., University of Puerto Rico, San Juan, Puerto Rico 00936
   Managing Editor: None
7. Owner: John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158

   The following is a list of stockholders owning or holding 1% or more of John Wiley & Sons, Inc. stock as of August 1980: Cynthia W. Darby, Box 651, Bridgehampton, NY 11932; Hamilton Darby, Box 651, Bridgehampton, NY 11932; D. W. Grout, W. B. Wiley 2nd, and P. B. Wiley, Executors of the Estate of Edward P. Hamilton, c/o Gifford, Woody, Palmer & Searles, 14 Wall Street, New York, NY 10005; W. Bradford Wiley and Deborah Wiley Grout, Trustees, Elizabeth W. Hamilton Trust, 605 Third Avenue, New York, NY 10016; Morgan Guaranty Trust and W. B. Wiley, Trustees under will of Elizabeth Wiley Hamilton, c/o Morgan Guaranty Trust Co., P.O. Box 491, Church St. Station, New York, NY 10008; Jenny R. Proskauer, P.O. Box 238, Church St. Station, New York, NY 10008; W. Bradford Wiley and Peter Booth Wiley, Trustees, f/b/o Deborah Elizabeth Wiley Grout, c/o John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10016; W. Bradford Wiley and W. Bradford Wiley II, Trustees, f/b/o Peter Booth Wiley, 605 Third Avenue, New York, NY 10016; Chemical Bank, P.O. Box 1368, Church St. Station, New York, N.Y. 10008; W. Bradford Wiley and Deborah Wiley Grout, Trustees, f/b/o William Bradford Wiley II, c/o John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10016; Hamilton D. Darby and Cynthia Wiley Darby, Trustees under will of William O. Wiley, c/o Gifford, Woody, Palmer & Searles, 14 Wall Street, New York, NY 10005; Adele E. Windheim, 8 Dundee Road, Larchmont, NY 10538; Mrs. Rosamond R. Pennywitt, 49 Bristol Place, Bay Head, NJ 08742; National Bank of Detroit, Woodward Avenue, Detroit, MI; Bank of New York, P.O. Box 11 203, New York, NY 10049; Morgan Guaranty Trust Company, 23 Wall Street, New York, NY 10005; Bradford Trust Company, 95 Wall Street, New York, NY 10005; Midland National Bank, 401 Second Avenue South, Minneapolis, MN 55480; W. Bradford Wiley, 605 Third Avenue, New York, NY 10016.

8. Known bondholders, mortgagees, and other security holders owning or holding one percent or more of the total amount of bonds, mortgages, or other securities: None
10. Extent and nature of circulation

	Average number of copies of each issue during preceding 12 months	Actual number of copies of single issue published nearest to filing date
A. Total number of copies printed	1017	1000
B. Paid circulation		
1. Sales through dealers and carriers, street vendors and counter sales	none	none
2. Mail subscriptions	843	857
C. Total paid circulation	843	857
D. Free distribution by mail, carrier or other means, samples, complimentary, and other free copies	69	64
E. Total distribution	912	921
F. Copies not distributed		
1. Office use, left over, unaccounted, spoiled after printing	105	79
2. Returns from news agents	none	none
G. Total	1017	1000

11. I certify that the statements made by me above are correct and complete.

Allan Wittman, *Publisher*

12. For completion by publishers mailing at the regular rates: 39 U. S. C. 3626 provides in pertinent part: "No person who would have been entitled to mail matter under former section 4359 of this title shall mail such matter at the rates provided under this subsection unless he files annually with the Postal Service a written request for permission to mail matter at such rates." In accordance with the provisions of this statute, I hereby request permission to mail the publication named in Item 1 at the phased postage rates presently authorized by 39 U. S. C. 3626.

Allan Wittman, *Publisher*

Developmental Psychobiology

A Research Journal in Behavioral and Neural Science

Volume 13, 1980

Editor-in-Chief

Gilbert W. Meier
Caribbean Primate Research Center
Medical Sciences Campus
University of Puerto Rico
San Juan, Puerto Rico 00936

Associate Editors

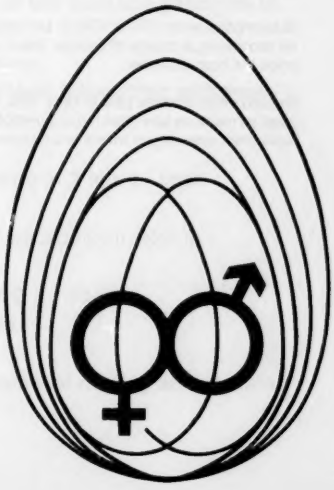
John C. Fentress
Department of Psychology
Dalhousie University
Halifax, N.S. B3H 4J1, Canada

Patricia S. Goldman-Rakic
Section of Neuroanatomy
Yale University School of Medicine
New Haven, Connecticut 06510

Norman D. Henderson
Department of Psychology
Oberlin College
Oberlin, Ohio 44074

Howard Moltz
Department of Psychology
University of Chicago
Chicago, Illinois 60637

Ronald W. Oppenheim
Neuroembryology Laboratory
Anderson Hall
Dorothea Dix Hospital
Raleigh, North Carolina 27611



an Interscience® Publication

published by JOHN WILEY & SONS

BOARD OF ADVISORY EDITORS

Robert Ader
Joseph Altman
J. Anthony Ambrose
I. A. Arshavksy
Leila B. Beckwith
Robert W. Bell
M. Bergström
Elliott M. Blass
Byron A. Campbell
Michael A. Corner
John E. Desmedt
Bernice T. Eiduson
Robert J. Ellingson
Bennett G. Galef, Jr.
Michael E. Goldberger
William T. Greenough
John A. King
Christiana M. Leonard
Seymour Levine
Donald B. Lindsley
William A. Mason
Eliane Noirot
Hanuš Papoušek
S. Michael Plaut
H. F. R. Prechtl
Robert R. Provine
Dominick P. Purpura
Austin H. Riesen
Jay S. Rosenblatt
Mark R. Rosenzweig
Lawrence A. Rothblat
Gene P. Sackett
Arnold Scheibel
Franz J. Schulte
Dennis J. Steizner
Ethel Tobach

Published bimonthly, one volume per year, by John Wiley & Sons, Inc. Copyright © 1980 by John Wiley & Sons, Inc., 605 Third Avenue, New York, New York 10158. All rights reserved. Reproduction or translation of any part of this work beyond that permitted by Sections 107 or 108 of the United States Copyright Law without the permission of the copyright owner is unlawful.

The code and the copyright notice appearing at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients, on the condition that the copier pay for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. The per-copy fee for each article appears after the dollar sign and is to be paid through the Copyright Clearance Center, Inc., 21 Congress Street, Salem, Massachusetts 01970. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Such permission requests and other permission inquiries should be addressed to the publisher.

Subscription price (1981): $70.00 per volume. Postage and handling outside U.S.A.: $12.00. Please allow four weeks for processing a change of address. Back volumes, microfilm, and microfiche are available for previous years. Request price list from publisher.

Second class postage paid at New York, New York and at additional mailing offices. Claims for undelivered copies must be made no later than three months following month of publication. Missing copies will be supplied when losses have been sustained in transit and if reserve stock permits.

Developmental Psychobiology

Volume 13, 1980

Contents

NO. 1, JANUARY 1980

1 **Early experience facilitates the development of temperature regulation in the cat**
R. A. Jensen, J. L. Davis, and A. Shnerson

7 **Paradoxical effects of *d*-amphetamine upon seizure susceptibility in 2 selectively bred lines of mice**
C. A. Greer and H. P. Alpern

17 **The development of social structure during the primary socialization period in German shepherds**
J. C. Wright

25 **Effects of number of pre-exposures on sucrose taste aversion in weanling rats**
J. J. Franchina, G. C. Domato, A. T. Patsiokas, and H. A. Griesemer

33 **Relationship between heart rate indices of the orienting response and birth weight in normal full-term newborns**
L. E. Stamps

37 **Effect of handling on positive and negative contrast effects**
J. W. Fagen and R. F. Rycek

47 **Role of the nursing order in social development of mountain lion kittens**
S. Pfeifer

55 **The effects of litter size on the expressivity of the jaundice genotype in Gunn rats**
D. L. Graham, L. L. Hasenstab, L. Kinney, and J. A. Kuntz

61 **Pavlovian excitation, internal inhibition, and their interaction with free operant avoidance as a function of age in rats**
R. R. Niemi and W. R. Thompson

77 **Infant responsiveness to maternal cues in mice of 2 inbred lines**
M. B. Hennessy, J. Li, and S. Levine

85 **Acquisition and retention of multidirectional escape behavior in preweanling rats**
J. R. Misanin, T. Brownback, L. D. Shaughnessy, and C. F. Hinderliter

95 **Learned responses to movement in neonates**
B. Evans

103 **Comment: A sociobiological analysis of communal nesting and of male parental care in laboratory mice**
B. A. Lown

NO. 2, MARCH 1980

107 **Gender differences in open-field behavior as a function of age**
J. Masur, M. T. Schutz, and R. Boerngen

111 **Alterations in the maternal behavior of rats rearing hypothyroid and hyperthyroid offspring**
I. B. Johanson

123 **Developmental changes in visual orienting behavior to featural versus structural information in the human infant**
J. T. Dineen and W. J. Meyer

131 **The "infantilization" of a cichlid fish**
E. Shaw and K. Innes

141 **The ontogenesis of defensive reactions to shock in preweanling rats**
A. C. Collier and R. C. Bolles

151 **Development of between-limb movement synchronization in the chick embryo**
R. R. Provine

165 **The ontogeny of nipple-shifting behavior in albino rats: Mechanisms of control and possible significance**
C. P. Cramer, E. M. Blass, and W. G. Hall

181 **Some effects of strain differences in the maternal behavior of inbred mice**
R. Ward

191 **Pathways between constitution and competence during the 1st 5 years of life**
G. E. Inoff, C. F. Halverson, Jr., M. G. Allen, and D. J. Cohen

205 **A model for development of social behavior in vervet monkeys**
C. A. Bramblett

225 **Comment: Prenatal motility and postnatal play: Functional continuity?**
M. Bekoff, J. A. Byers, and A. Bekoff

229 **Comment: On the necessity for a shift in emphasis from means-oriented to problem-oriented research in developmental psychobiology**
R. N. Walsh

NO. 3, MAY 1980

233 **Adult responsiveness to ultrasonic signals from gerbils of varying ages: Parity, gender, and housing effects**
D. Kleese and E. Hull

243 **A biobehavioral developmental profile (BDP) for the pigtailed monkey**
M. Reite and R. Short

287 **Dietary and metabolic effects on rhesus social behavior: Protein and protein-calorie malnutrition**
A. S. Chamove

299 **Dietary and metabolic effects on rhesus social behavior: Phenylalanine-related dietary alterations**
A. S. Chamove

309 **Early social isolation of the domestic cat: Responses to separation from social and nonsocial rearing stimuli**
G. W. Guyot, H. A. Cross, and T. L. Bennett

317 **The effects of social isolation on the behavior of juvenile domestic cats**
G. W. Guyot, T. L. Bennett, and H. A. Cross

331 **Development of home orientation in hypothyroid and hyperthyroid rat pups**
I. B. Johanson, G. Turkewitz, and M. Hamburgh

343 **Development of olfactory and thermal responsiveness in hypothyroid and hyperthyroid rat pups**
I. B. Johanson

No. 4, JULY 1980

353 **Metamorphosis and adaptation in the behavior of developing organisms**
R. W. Oppenheim

357 **Development of motor activity in kittens**
M. S. Levine, C. D. Hull, and N. A. Buchwald

373 **Ontogeny of short- and long-term memory capacities for passive avoidance training in undernourished mice**
Z. M. Nagy, K. J. Porada, and A. P. Monsour

385 **Ontogeny of passive avoidance: Role of task demands and development of species-typical behaviors**
D. J. Stehouwer and B. A. Campbell

399 **Prenatal influence of mild decompressions on hooded rats**
C. A. Graessle

409 **Gender differences in visual discrimination by rats in response to malnutrition of varying durations**
J. R. Galler and M. Manes

417 **The first foray: Maternal influences in nest egression in the weanling rat**
J. R. Alberts and M. P. Leimbach

431 **Comment: Attempts at equivalent maternal care for well-fed and underfed offspring: Are the problems appreciated?**
J. L. Smart

435 **Comment: Priority and reliability of Codo and Carlini's procedure**
J. R. Galler

437 **Book review: Studies on the development of behavior and the nervous system. Volume 4. Early influences**
R. W. Oppenheim

441 **Book review: Critical periods**
D. B. Miller

NO. 5, SEPTEMBER 1980

443 **The ontogenesis of sleep states, thermogenesis, and thermoregulation in the Virginia opossum**
J. M. Walker and R. J. Berger

455 **Ontogeny of behavioral sensitivity to glycine in the chick embryo**
J. Reitzel and R. W. Oppenheim

463 **Interaction of separation discomfort with contact comfort and discomfort in the dog**
J. C. Gurski, K. Davis, and J. P. Scott

469 **Retention under changed-reward conditions of persistence learned by infant rats**
J.-S. Chen and A. Amsel

481 **Learned persistence at 11–12 days but not at 10–11 days in infant rats**
J.-S. Chen and A. Amsel

493 **Relative effects of maternal and pup heredity on postnatal mouse development**
P. Wainwright

499 **Early perceptual selectivity in the swamp sparrow**
R. Dooling and M. Searcy

507 **Child abuse: Evidence from nonhuman primates**
R. D. Nadler

513 **Passive avoidance learning in the young rat**
D. Blozovski and A. Cudennec

519 **Acquisition and retention of classical conditioning in the newborn rat**
J. Bachevalier and D. Blozovski

527 **Gender and early environmental influences on activity, overresponsiveness, and exploration**
R. Joseph and R. E. Gallagher

545 **Retained elements of early avoidance training and relearning of forgotten operants**
P. S. Sussman and H. B. Ferguson

NO. 6, NOVEMBER 1980

563 **Home-orienting behavior in rat pups surviving postnatal or intergenerational malnutrition**
J. R. Galler

573 **Maternal behavior, pup vocalizations, and pup temperature changes following handling in mice of 2 inbred strains**
M. B. Hennessy, J. Li, E. L. Lowe, and S. Levine

585 **Periodicity in the behavior of grain beetle larvae**
I. M. Sheimann, S. S. Khutzian, G. S. Ignatovitch

591 **Interactive effects of nutrition and cannabis upon rat perinatal development**
A. T. Charlebois and P. A. Fried

607 **Circumcision, gender differences, and neonatal behavior: An update**
Y. Brackbill and K. Schroder

615 **Models of infantile malnutrition in rats: Effects on maternal behavior**
L. S. Crnic

629 **EEG developmental stages**
H. T. Epstein

633 **Learning deficits in the neonatal Peking duckling produced by decreased oxygen consumption during late prenatal periods: A cautionary note**
M. B. Heaton and S. L. Klein

637 **Age differences in the duration of mating periods of female rhesus monkeys**
M. E. Wilson and T. P. Gordon

643 **Fertility, maternal care, and offspring behavior in mice prenatally treated with tobacco smoke**
D. S. Baer, G. E. McClearn, and J. R. Wilson

653 **Developmental, behavioral, and pharmacological characteristics of rat offspring from mothers receiving ethanol during gestation or lactation**
V. A. da Silva, M. J. Ribeiro, and J. Masur

661 **Erratum: Metamorphosis and adaptation in the behavior of developing organisms**

663 **Announcement**

665 **Acknowledgment**

667 **Information for contributors**

669 **Author index**

673 **Subject index**

iii **Volume contents**